

There is not currently information from published scientific reports about susceptibility of pregnant women to COVID-19. Pregnant women experience immunologic and physiologic changes which might make them more susceptible to viral respiratory infections, including COVID-19.

Pregnant women

Q: Are pregnant women more susceptible to infection, or at increased risk for severe illness, morbidity, or mortality with COVID-19, compared with the general public?

A: We do not have information from published scientific reports about susceptibility of pregnant women to COVID-19. Pregnant women experience immunologic and physiologic changes which might make them more susceptible to viral respiratory infections, including COVID-19. Pregnant women also might be at risk for severe illness, morbidity, or mortality compared to the general population as observed in cases of other related coronavirus infections [including severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV)] and other viral respiratory infections, such as influenza, during pregnancy.

Though person-to-person spread of the virus that causes COVID-19 has been observed in the United States among close contacts, this virus is not currently spreading among persons in the community in the United States and the immediate <u>risk</u> to the general public is low. Pregnant women should engage in usual preventive actions to avoid infection like washing hands often and avoiding people who are sick.



Q: Are pregnant women with COVID-19 at increased risk for adverse pregnancy outcomes?

A: We do not have information on adverse pregnancy outcomes in pregnant women with COVID-19. Pregnancy loss, including miscarriage and stillbirth, has been observed in cases of infection with other related coronaviruses [SARS-CoV and MERS-CoV] during pregnancy. High fevers during the first trimester of pregnancy can increase the risk of certain birth defects.

Q: Are pregnant healthcare personnel at increased risk for adverse outcomes if they care for patients with COVID-19?

A: Pregnant healthcare personnel (HCP) should follow <u>risk assessment</u> and <u>infection control</u> guidelines for HCP exposed to patients with suspected or confirmed COVID-19. Adherence to recommended infection prevention and control practices is an important part of protecting all HCP in healthcare settings. Information on COVID-19 in pregnancy is very limited; facilities may want to consider limiting exposure of pregnant HCP to patients with confirmed or suspected COVID-19, especially during higher risk procedures (e.g., aerosol-generating procedures) if feasible based on staffing availability.





Transmission during pregnancy or during delivery

Q: Can pregnant women with COVID-19 pass the virus to their fetus or newborn (i.e. vertical transmission)?

A: The virus that causes COVID-19 is thought to spread mainly by close contact with an infected person through respiratory droplets. Whether a pregnant woman with COVID-19 can transmit the virus that causes COVID-19 to her fetus or neonate by other routes of vertical transmission (before, during, or after delivery) is still unknown. However, in limited recent case series of infants born to mothers with COVID-19 published in the peer-reviewed literature, none of the infants have tested positive for the virus that causes COVID-19. Additionally, virus was not detected in samples of amniotic fluid or breastmilk.

Limited information is available about vertical transmission for other coronaviruses (MERS-CoV and SARS-CoV) but vertical transmission has not been reported for these infections.





Infants

Q: Are infants born to mothers with COVID-19 during pregnancy at increased risk for adverse outcomes?

A: Based on limited case reports, adverse infant outcomes (e.g., preterm birth) have been reported among infants born to mothers positive for COVID-19 during pregnancy. However, it is not clear that these outcomes were related to maternal infection, and at this time the risk of adverse infant outcomes is not known. Given the limited data available related to COVID-19 during pregnancy, knowledge of adverse outcomes from other respiratory viral infections may provide some information. For example, other respiratory viral infections during pregnancy, such as influenza, have been associated with adverse neonatal outcomes, including low birth weight and preterm birth. Additionally, having a cold or influenza with high fever early in pregnancy may increase the risk of certain birth defects. Infants have been born preterm and/or small for gestational age to mothers with other coronavirus infections, SARS-CoV and MERS-CoV, during pregnancy.

Q: Is there a risk that COVID-19 in a pregnant woman or neonate could have long-term effects on infant health and development that may require clinical support beyond infancy?

A: At this time, there is no information on long-term health effects on infants either with COVID-19, or those exposed to the virus that causes COVID-19 in utero. In general, prematurity and low birth weight are associated with adverse long-term health effects.



Transmission through breast milk

Q: Is maternal illness with COVID-19 during lactation associated with potential risk to a breastfeeding infant?

A: Human-to-human transmission by close contact with a person with confirmed COVID-19 has been reported and is thought to occur mainly via respiratory droplets produced when a person with infection coughs or sneezes.

In limited case series reported to date, no evidence of virus has been found in the breast milk of women with COVID-19. No information is available on the transmission of the virus that causes COVID-19 through breast milk (i.e., whether infectious virus is present in the breast milk of an infected woman).

In limited reports of lactating women infected with SARS-CoV, virus has not been detected in breast milk; however, antibodies against SARS-CoV were detected in at least one sample.





Interim Guidance on Breastfeeding for a Mother Confirmed or Under Investigation for COVID-19

This interim guidance is intended for women who are confirmed to have COVID-19 or are <u>persons-under-investigation</u> (<u>PUI</u>) for COVID-19 and are currently breastfeeding. This interim guidance is based on what is currently known about COVID-19 and the transmission of other viral respiratory infections. CDC will update this interim guidance as needed as additional information becomes available. For breastfeeding guidance in the immediate postpartum setting, refer to <u>Interim Considerations for Infection Prevention and Control of 2019 Coronavirus Disease 2019 (COVID-19) in <u>Inpatient Obstetric Healthcare Settings</u>.</u>

Transmission of COVID-19 through breast milk

Much is unknown about how COVID-19 is spread. Person-to-person spread is thought to occur mainly via respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza (flu) and other respiratory pathogens spread. In limited studies on women with COVID-19 and another coronavirus infection, Severe Acute Respiratory Syndrome (SARS-CoV), the virus has not been detected in breast milk; however we do not know whether mothers with COVID-19 can transmit the virus via breast milk.





Interim Guidance on Breastfeeding for a Mother Confirmed or Under Investigation for COVID-19

CDC breastfeeding guidance for other infectious illnesses

Breast milk provides protection against many illnesses. There are <u>rare exceptions when breastfeeding or feeding expressed breast milk is not recommended</u>. CDC has no specific guidance for breastfeeding during infection with similar viruses like SARS-CoV or Middle Eastern Respiratory Syndrome (MERS-CoV).

Outside of the immediate postpartum setting, <u>CDC recommends that a mother with flu continue breastfeeding or feeding expressed breast milk to her infant</u> while taking precautions to avoid spreading the virus to her infant.

Guidance on breastfeeding for mothers with confirmed COVID-19 or under investigation for COVID-19

Breast milk is the best source of nutrition for most infants. However, much is unknown about COVID-19. Whether and how to start or continue breastfeeding should be determined by the mother in coordination with her family and healthcare providers. A mother with confirmed COVID-19 or who is a symptomatic PUI should <u>take all possible precautions</u> to avoid spreading the virus to her infant, including washing her hands before touching the infant and wearing a face mask, if possible, while feeding at the breast. If expressing breast milk with a manual or electric breast pump, the mother should wash her hands before touching any pump or bottle parts and follow <u>recommendations</u> for proper pump cleaning after each use. If possible, consider having someone who is well feed the expressed breast milk to the infant.



There is no evidence that children are more susceptible to COVID-19. In fact, most confirmed cases of COVID-19 reported from China have occurred in adults. Infections in children have been reported, including in very young children. There is an ongoing investigation to determine more about this outbreak. This is a rapidly evolving situation and information will be updated as it becomes available.

Q: Are children more susceptible to the virus that causes COVID-19 compared with the general population and how can infection be prevented?

A: No, there is no evidence that children are more susceptible. In fact, most confirmed cases of COVID-19 reported from China have occurred in adults. Infections in children have been reported, including in very young children. From limited information published from past Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) outbreaks, infection among children was relatively uncommon.

Person-to-person spread of the virus that causes COVID-19 has been seen among close contacts of returned travelers from Hubei province in China. This virus is not currently spreading in the community in the United States and risk to the general public is low. Children should engage in usual preventive actions to avoid infection, including cleaning hands often using soap and water or alcohol-based hand sanitizer, avoiding people who are sick, and staying up to date on vaccinations, including influenza vaccine. Additional information on prevention measures can be found here (Prevention for 2019 Novel Coronavirus).





Q: Does the clinical presentation of COVID-19 differ in children compared with adults?

A: Limited reports of children with COVID-19 in China have described cold-like symptoms, such as fever, runny nose, and cough. Gastrointestinal symptoms (vomiting and diarrhea) have been reported in at least one child with COVID-19. These limited reports suggest that children with confirmed COVID-19 have generally presented with mild symptoms, and though severe complications (e.g., acute respiratory distress syndrome, septic shock) have been reported, they appear to be uncommon. More information on CDC Clinical Guidance for COVID-19 can be found here (https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html).

Q: Are children at increased risk for severe illness, morbidity, or mortality from COVID-19 infection compared with adults?

A: There have been very few reports of the clinical outcomes for children with COVID-19 to date. Limited reports from China suggest that children with confirmed COVID-19 may present with mild symptoms and though severe complications (e.g., acute respiratory distress syndrome, septic shock) have been reported, they appear to be uncommon. However, as with other respiratory illnesses, certain populations of children may be at increased risk of severe infection, such as children with underlying health conditions.





Q: Are there any treatments available for children with COVID-19?

A: There are currently no antiviral drugs recommended or licensed by the U.S. Food and Drug Administration for COVID-19. Clinical management includes prompt implementation of <u>recommended infection prevention and control measures</u> in healthcare settings and supportive management of complications. More information on CDC Clinical Guidance for COVID-19 can be found here (https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html).

Children and their family members should engage in usual preventive actions to prevent the spread of respiratory infections, including covering coughs, cleaning hands often with soap and water or alcohol-based hand sanitizer, and staying up to date on vaccinations, including influenza. Additional information on prevention measures can be found here (<u>Prevention for 2019 Novel Coronavirus</u>).

For information on COVID-19 and pregnancy, please see: https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/pregnancy-faq.html

For CDC guidance related to COVID-19 and breastfeeding, please see: https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/pregnancy-guidance-breastfeeding.html

